

AMENDMENTS TO THE CLAIMS

1. (Currently amended) ~~A computer system that facilitates management of~~ At least one computer-readable storage medium having instructions recorded thereon which, when executed, perform a method of managing a file system filter, the method comprising:

identifying an integer altitude value of a at least one minifilter, that has an integer altitude value associated therewith; and

mapping an altitude, defined by the integer altitude value, a filter manager that maps altitudes of the at least one minifilter to one of a plurality of legacy filter order groups, the mapping comprising:

determining an altitude range associated with at least a portion of the legacy filter order groups;

determining whether any altitude range of a legacy filter order group encompasses the integer altitude value of the minifilter;

if an altitude range of a legacy filter order group encompasses the integer altitude value of the minifilter, then inserting the minifilter into the legacy filter order group; and

if no altitude range of a legacy filter order group encompasses the integer altitude value of the minifilter, then creating a new filter order group and inserting the minifilter into the new filter order group.

2-4. (Cancelled)

5. (Currently amended) ~~The system~~ at least one computer-readable storage medium of claim 1, wherein multiple instances of the filter manager attach to a file system stack.

6. (Currently amended) The ~~system~~ at least one computer-readable storage medium of claim 5, wherein each instance of the filter manager is associated with a unique interval of altitude values.
7. (Currently amended) The ~~system~~ at least one computer-readable storage medium of claim 1, wherein the ~~at least one~~ minifilter is coded to permit dynamic loading and/or unloading to a filter stack.
8. (Currently amended) The ~~system~~ at least one computer-readable storage medium of claim 7, wherein the altitude of the ~~at least one~~ minifilter ensures that the ~~at least one~~ minifilter, if unloaded, will reload to its previous position in the filter stack.
9. (Currently amended) The ~~system~~ at least one computer-readable storage medium of claim 1, further comprising instructions defining dynamically associating the minifilter with at least one frame, ~~dynamically associated with a single minifilter.~~
10. (Cancelled)
11. (Currently amended) The ~~system~~ at least one computer-readable storage medium of claim 10 wherein, ~~further comprising~~ a numerical interval is associated with each frame.
12. (Cancelled)
13. (Currently amended) A computer operable to manage implemented method for managing a file system filter, the computer comprising at least one processor programmed to:

loading at least one load a minifilter to a file system, the file system comprising at least one filter manager frame; and

determining determine an integer altitude value associated with the at least one minifilter;

determine an altitude range [L, H] associated with each at least one filter manager frame, wherein L is the lower boundary value of the altitude range and H is the upper boundary value of the altitude range;

determine whether any altitude range associated with the at least one filter manager frame encompasses the integer altitude value associated with the minifilter;

if an altitude range associated with a filter manager frame encompasses the integer altitude value associated with the minifilter, such that $L < X < H$ where X is the altitude of the minifilter, then insert the minifilter into the filter manager frame; and

if no altitude range associated with a filter manager frame encompasses the integer altitude value associated with the minifilter, then:

determine a lower altitude range $[L_1, H_1]$ and a higher altitude range $[L_2, H_2]$ closest to the integer altitude value X, such that X is greater than the upper boundary value of the lower altitude range H_1 and less than the lower boundary value of the higher altitude range L_2 ;

insert the minifilter into the filter manager frame having the higher altitude range;

and

adjust the higher altitude range to $[X, H_2]$.

14-16. (Cancelled)

17. (Currently amended) The ~~method~~ computer of claim 13, wherein the at least one processor is further programmed to comprising updating update a filter object associated with the at least one minifilter to point to the filter manager frame into which the minifilter has been inserted.

18. (Cancelled)

19. (Currently amended) The ~~method computer~~ of claim 18 13, wherein the at least one processor is further programmed to; ~~comprising~~:

~~inserting the at least one minifilter into the frame having the higher interval;~~

~~adjusting the interval of the frame to $[X, H_2]$; and~~

~~initializing the initialize a filter object associated with the at least one minifilter to point to the filter manager frame into which the at least one minifilter has been inserted.~~

20. (Currently amended) The ~~method computer~~ of claim 18, wherein the at least one processor is further programmed to, ~~comprising creating a new frame and stacking the new frame at the top of the file system stack~~, if no intervals lower or higher altitude range is determined to be closest to the integer value X, ~~then adjacent to the altitude value of the at least one minifilter are found~~ create a new filter manager frame and arranging the new filter manager frame at the top of the file system stack.

21. (Currently amended) The ~~method computer~~ of claim 20, wherein the at least one processor is further programmed to ~~comprising pre-allocating~~ pre-allocate the new filter manager frame for management of the ~~at least one minifilter~~.

22. (Currently amended) The ~~method computer~~ of claim 21, wherein the at least one processor is further programmed to ~~comprising calling~~ call the filter manager's file system notification routine to submit a request to register for file system notifications.

23. (Currently amended) The ~~method computer~~ of claim 22, wherein the at least one processor is further programmed to, if the request to register is successful: comprising:

inserting insert the minifilter into the new frame;

initializing initialize the filter manager frame interval altitude range upper and lower boundary values to the altitude value of the ~~at least one~~ minifilter such that the interval altitude range is [H, X]; and

updating update a filter object associated with the ~~at least one~~ minifilter to point to the new frame, ~~;~~ wherein the request to register was successful.

24. (Currently amended) The ~~method computer~~ of claim 22, wherein the at least one processor is further programmed to, if the request to register is unsuccessful: comprising:

removing remove the new frame from the filter stack;

extracting extract the altitude interval from the next lower, now top-most, frame in the stack;

collapsing collapse the at least one minifilter into the top-most frame; and

adjusting adjust the frame interval so that the upper boundary value is set equal to the value of the altitude of the at least one minifilter, such that the adjusted interval is [L, X], ~~;~~ wherein the request for registration failed.

25. (Currently amended) The ~~method computer~~ of claim 22, wherein the at least one processor is further programmed to comprising determining determine the identity of a frame calling into the file system notification routine.

26. (Currently amended) The ~~method computer~~ of claim 25, wherein the at least one processor is programmed to determine the identity of the frame ~~is determined~~ by counting the number of all

filter manager device objects, N, already in the stack, from top to bottom, using existing application programming interfaces, and wherein each device object represents a frame.

27. (Currently amended) The ~~method~~ computer of claim 26, wherein the at least one processor is further programmed to initialize ~~comprising initializing~~ a counter to N and decrementing the counter for every node encountered from the bottom to the top of the stack.

28. (Currently amended) The ~~method~~ computer of claim 27, wherein a zero value in the counter represents the position of the frame that corresponds to the attachment of the filter manager.

29-34. (Cancelled)